Staff member	Organisation	Academic Group	Size 45/60/90/120 eg. BScHons = 45pt, BiomedHons = 90pt, taught MSc = 60pt, MSc = 120pt	Title/Area	Expiry Date	Relevant Courses
Phylogeny and Evolution						
Alexei Drummond	SBS	EEB	45/90/120	Computational models for single-cell sequencing and tumour evolution		
Alexei Drummond	SBS	EEB	120	Statistical models of protein structure evolution		
Alexei Drummond	SBS	EEB	45/120	Statistical geometry of phylogenetic tree space		COMPSCI 369
Nicholas Matzke	SBS	EEB	45/60/90/120	Phylogenetic biogeography: testing / comparing computational inference methods		
Nicholas Matzke	SBS	EEB	45/60/90/120	Phylogenetic biogeography of a clade of interest (living and/or fossil)		
Nicholas Matzke	SBS	EEB	45/60/90/120	Phylogenetic history of bacterial flagellum proteins and relatives		
Nicholas Matzke	SBS	EEB	45/60/90/120	Phylogenetic history of bacterial flagellum proteins and relatives - evolution of axial proteins		
Nicholas Matzke	SBS	EEB	45/60/90/120	Protein structure phylogenetics: Applied to a deep protein evolution question of interest		
Caroline Puente-Lelièvre	SBS	EEB	45/60/90/120	Plant phylogenetics and evolution		
Simon Greenhill	SBS	EEB	45/60/90/120	A phylogenetic analysis of the languages of New Guinea		
Simon Greenhill	SBS	EEB	45/60/90/120	Using AI and Large Language Models to automatically code cultural data		
Simon Greenhill	SBS	EEB	45/60/90/120	Visualising language phylogenies: adapting NextStrain.org to language data		
Simon Greenhill	SBS	EEB	45/60/90/120	How far back can we trace the evolutionary history of languages?		
Caroline Puente-Lelièvre/Jan	SBS	EEB/CMP	45/60/90/120	How did enzyme regulation evolve?		
Kim Handley	SBS	EEB	90/120	Phylogeny of cyanobacterial accessory genes such as those associated with nutrient acquistion and storage or toxin production		
Manpreet Dhami	SBS/LCR	EEB	120	What makes a successful competitor? Understanding eco-evolutionary dynamics in nectar yeasts. Data-analysis based project	Student stipend available, experience in statistical modelling required	
Manpreet Dhami	SBS/LCR	EEB	90/120	Shifting landscape of the antibacterial resistome in the kiwi gut microbiome - genomic data analysis based project		
Manpreet Dhami	SBS/LCR	EEB	120	Disentangling global patterns of host-bacteria co-evolution using basal NZ scale insects and their symbionts, collaborative project with OIST		
Maj Padamsee	SBS/LCR	EEB	120	Fungal phylogenetics/systematics--various groups		
Marine/Freshwater Projects						
Alice Della Penna	IMS/SBS	EEB	60/90/120	Plankton community composition - an imaging perspective		BIOSCI334
Andrew Jeffs	IMS/SBS	EEB	120	Baby food for mussels - what do mussel infants need in order to thrive?		
Emma Carroll/Rochelle Cons	SBS/IMS	EEB	60	Stable isotopes of marine predators		
Maren Wellenreuther	SBS/PFR	EEB	120	Image-based phenomics: using AI to quantify growth in snapper		
Maren Wellenreuther	SBS/PFR	EEB	120	Marine water microbiomes and fish diseases		
Mary Sewell	SBS	EEB	120	Early lipid use in the Antarctic sea urchin, Sterechinus neumayeri		
Mary Sewell	SBS	EEB	120	Spatial patterns in the zooplankton of Rangitahua (Kermadecs)		BIOSCI 208, BIOSCI 334, BIOSCI 333
Kim Handley	SBS	EEB	120	Determining metabolic dependencies in cyanobacteria (inter-species collaborations)		
Xavier Pochon	IMS/Cawthron	JGS		Environmental DNA monitoring in aquatic ecosystems		
Kendall Clements	SBS	CMPB	120	Functional variation in parrotfish pharyngeal anatomy		BIOSCI 322, 335, 725, 729
Kendall Clements	SBS	CMPB	120	Diet of parrotfishes inferred from pharyngeal contents		BIOSCI 335, 725
Libby Liggins	SBS	EEB	45/60/120	Genetic signatures of range extension in marine organisms		
Libby Liggins	SBS	EEB	120	From larvae, through recruitment, into the adult population: phenotypic predictors of success and genotypic shifts within a damselfish population		
Libby Liggins	SBS	EEB	60/120	Spatial predictors of symbiont communities in Giant clams (Tridacna) characterised by metabarcoding		
Zoology/Behaviour/Biodiversity Projects						
Anne Gaskett	SBS	EEB	45/60/90/120	sensory ecology, interactions, animal colour vision (e.g. seabird plastic ingestion or light pollution, or plant-animal interactions such as pollination or fruit dispersal, with native plants, esp. mosses, orchids or other flowering plants). Can involve various combinations of lab, field and computer-based work. Accessible options possible. Inclusive, welcoming and diverse labgroup.		BIOSCI338, BIOSCI337, BIOSCI325, BIOSCI73
Brendon Dunphy	SBS/IMS	EEB	45/60/120	Heavy metal pollutants in seabird populations		
Darren Ward	SBS	EEB	45/60/120	Do citizen scientists (iNaturalist) and museum collections collect similar data on biodiversity? Involves data wrangling		
Darren Ward	SBS	EEB	60/120	Building an image library for the automatic recognition of bees and wasps. Involves imaging, building AI identification models, work in taxonomic collection.		
Darren Ward	SBS	EEB	60/120	Identification and pollination biology of hoverflys (Syrphidae). Involves imaging, building AI identification models, work in taxonomic collection.		
David Pattemore	SBS/PFR	EEB	45/60	Factors correlated with successful occupation of artificial nest sites by bumble bees		
David Pattemore	SBS/PFR	EEB	90/120	Effects of wind speed on bat behaviour - primarily desktop study of existing datasets		
David Pattemore	SBS	EEB	120	Assessing habitat suitability and habitat use of Rangitoto for North Island brown kiwi, in partnership with Save the Kiwi		
David Seldon	SBS	EEB	120	Revision of the Mecodema infimate species group (ground beetles)		
David Seldon	SBS	EEB	90/120	Parasitoid micro-wasp diversity in forest restoration		
David Seldon	SBS	EEB	90/120	Parasitoid micro-wasp diversity of salt marsh/mangroves		
David Seldon	SBS	EEB	120	Why do Megadromus/Zeopoecilus have colour reflections (ground beetles vs birds?)		
David Seldon	SBS	EEB	120	Revision of Pterostichini genera (ground beetles)		
Greg Holwell	SBS	EEB	45/60/90/120	Wing shape as an antipredator adaptation in insects		
Greg Holwell	SBS	EEB	45/60/90/120	Camouflage and colour polymorphism in Aotearoa's insects		
Greg Holwell	SBS	EEB	45/60/90/120	The effect of wing transparency on camouflage in insects		
James Russell	SBS/Stats	EEB	60	Attitudes to pest management in China		
Kristal Cain	SBS	EEB	45/60/120	Avian sleep behaviour and daytime acitivity post disturbance. (captive zebra finches)		BIOSCI 337 & 338, BIOSCI 735
Margaret Stanley	SBS	EEB	LAB FULL for 2025	urban ecology (urban forest, birds, etc), invasive species (any terrestrial taxa!), desktop analysis projects, fieldwork		BIOSCI394, BIOSCI 747, BIOSCI 748 (any ecc
Jacqueline Beggs	SBS	EEB	45/60/90/120	Ecology of urban industrial zones		
Al Glen	SBS	EEB		120 Native plants as lures for possum management		
Al Glen	SBS	EEB		120 Spatio-temporal interactions within invasive predator guilds		

Al Glen	SBS	EEB	120	Reducing nest predation using conditioned taste aversion		
Plant and Other Terrestrial Projects						
Anne Gaskett	SBS	EEB	45/60/90/120	sensory ecology, interactions, animal colour vision (e.g. seabird plastic ingestion or light pollution, or plant-animal interactions such as pollination or fruit dispersal, with native plants, esp. mosses, orchids, other flowering plants)		BIOSCI338, BIOSCI337, BIOSCI325, BIOSCI3
Bruce Burns	SBS	EEB	60/120	Meta-analysis of fern ecology in the Chinese literature & comparison with NZ fern ecology		
Cate Macinnis-Ng	SBS	EEB	60	A range of projects exploring climate change effects on plants and ecosystems		
Cate Macinnis-Ng	SBS	EEB	120	Responses of native plants to drought and heatwaves using glassshouse trials		
Gavin Lear	SBS	EEB	60/90/120	Soil microbiology and ecosystem health		
James Brock	SBS	EEB	45/60/90/120	Bryophyte use by birds in nests		
James Brock	SBS	EEB	60/90/120	Fern gametophyte ecology		
James Brock	SBS	EEB	60/90/120	Filmy fern (*Hymenophyllum* spp.) ecology		
James Brock	SBS	EEB	120	Tree fern epiphytism: competition and stress		
ZhiQiang Zhang	SBS/LCR	EEB	120	Unseen forces on plants: effects of mites on plant health		
ZhiQiang Zhang	SBS/LCR	EEB	120	Behaviour and ecology of insect-mite interactions on plants		
ZhiQiang Zhang	SBS/LCR	EEB	120	Native and naturalised nematode fauna of Pinus radiata in New Zealand		
Zhi-Qiang Zhang	SBS/LCR	EEB	120	Mating behaviour in polyandrous mites		
Nari Williams	SBS/PFR	EEB	45/60/90/120	Investigating the persistance of Phytophthora species in forest soils		
Shane Wright	SBS	EEB	45/60/90	Comparative colour in the Genus *Myrsine*		
Susan Thomson	SBS/PFR	CMPB	120	Refining resistance gene annotations across Actinidia species		
Mike Taylor	SBS	BHB	45/60/90/120	Bird and reptile microbiomes		
Maj Padamsee	SBS/LCR	EEB	120	Mycorrhizae and ecosystems under threat		
Maj Padamsee	SBS/LCR	EEB	45/120	Fungal diversity		
Matt Templeton	SBS/PFR	CMP	90/120	Improving gene editing methodology to understand virulence in the fungal plant pathogen of apple		
Matt Templeton	SBS/PFR	CMP	45-120	Understanding hte evolution of copper resistance in Psa		
Biomedical and Human Biology						
Anthony Phillips	SBS	BHB	120	Lymphatic modulation		
Augusto Barbosa	SBS	BHB/CMPB	120	The interplay between infection and dysbiosis in the health and disease of the human urogenital tract		
Billy Sheppard	SBS	BHB	120	Gene editing for fragile skin conditions		
Shaun Lott	SBS	CMPB/BHB	60/90/120	RNaseHI as a target for new antibiotics		
Christopher Walker	SBS	BHB	120	Understanding GPCR regulation and signalling		
Garth Cooper	SBS	BHB	120	"Role of altered cerebral proteolysis in the pathogenesis of sporadic Alzheimer's disease"		
Inken Kelch	SBS	BHB	45/60/90/120	Extensive 3D imaging of immune organs		
John Taylor	SBS	BHB	45/60/90/120	Screening natural and synthetic molecules for antiviral activity		
Juliet Gerrard	SBS	BHB		The interface between science and science policy		
Kerry Loomes	SBS	BHB	45	Malic enzyme and cancer: structure-activity relationships		
Paul Harris	SBS	BHB	120	Novel polymyxins to treat Gram negative pathogens		
Jennifer Miles-Chan	SBS	BHB	90/120	Peak nutrition for metabolic health		BIOSCI358 / MEDSCI315
Emma Scotter	SBS	BHB	No projects available 2025 sem 1	Causes and cures of motor neuron disease		
Molly Swanson	SBS	BHB	90/120	Microglia in motor neuron disease		
Nicole Edwards	SBS	BHB	45/60/90	RNA Velocity based approach for modelling cell state changes in neurodegenerative disease		*Sem 2 only please
Nicole Edwards	SBS	BHB	45/60/90	Spatial omics approaches to understanding neurodegenerative disease		*Sem 2 only please
Alicia Didsbury/Daniel Verdo	SBS	BHB/CMPB	60/120	Adoptive T cell immunotherapy		
Cellular, Molecular and Physiological Biology						
Andrew Allan	SBS/PFR	CMPB	120	Encouraging sugar over-accumulation in kiwifruit		
Anthony Poole	SBS	CMPB	90/120	Building phylogenies from protein structures		
Chris Carrie	SBS	CMPB	45/60/90/120	Developing a cell type specific CRISPR system in Arabidopsis		
Chris Carrie	SBS	CMPB	45/60/90/120	Characterisation of essential proteins required for chloroplast biogenesis		
Chris Carrie	SBS	CMPB	45/60/90/120	Gene regulatory network prediction in plants.		
Christopher Squire	SBS	CMPB	45/60/90/120	Discovering new molecular superglues OR the ubiquity of the Ig domain		
Christopher Squire	SBS	CMPB	45/60/90	How do polymyxin analogues disrupt membranes?		
Christopher Squire	SBS	CMPB	45/60/90/120	Simulating molecular superglue dynamics - is my glue too floppy?		
Craig Millar	SBS	CMPB	60	A circadian and cirannual framework for the coming ethomics era		
Craig Millar	SBS	CMPB	90/120	Developing methods to sequence the complete mtDNA of avain species using nanopore technology		
Craig Millar	SBS	CMPB	60/90	Population genetic analysis of the endangered Chatham Island Taiko		
Ghader Bashiri	SBS	CMPB	60/90/120	Molecular technologies for methane mitigation in livestock		
Ghader Bashiri	SBS	CMPB	60/90/120	Novel protein targets against tuberculosis		
Ghader Bashiri	SBS	CMPB	60/90/120	Understanding regulatory mechanisms in proteins		
David Goldstone	SBS	CMPB	120	Using structural biology to understand the molecular targeting retroviral disease		BIOSCI350
Gavin Lear	SBS	EEB	60/90/120	Methods for the isolation of novel plastic-degrading bacteria		
Iain Hay	SBS	CMPB	45/60/90/120	Characterising a novel phage derived pore forming antibacterial toxin		
Iain Hay	SBS	CMPB	60/90/120	Bacteria Type II secretion system assembly		
Iain Hay	SBS	CMPB	45/60	Phage discovery		
Iain Hay	SBS	CMPB	60/90/120	Tailocin receptor binding protein engineering (customisable bacteriocins)		
Jamie Taka	SBS	CMPB	120	Understanding allosteric mechanisms in isocitrate lyase proteins		BIOSCI757
Jane Allison	SBS	CMPB	45/60/90/120	Permeability/transport of antidepressants through the blood-brain barrier (computer simulations)		
Jane Allison	SBS	CMPB	45/60/90/120	Antimicrobial peptide mechanism of action (computer simulations)		
Karine David	SBS	CMPB	120	Analysis of candidate genes involved in fruit size in kiwifruit (2 projects)		
Karine David/Robert Schaffer	SBS	CMPB	90/120	Mechanisms regulating russeting in apple		
Kendall Clements	SBS	CMPB		The relationship between pharyngeal structure and diet in parrotfishes		
Matthew Sullivan	SBS	CMPB	120	Understanding the interaction between plecstatin-1 and plectin		

Matthew Templeton	SBS/PFR	CMPB	60/120	Effector function in kiwifruit bacterial canker disease		
Shaun Lott	SBS	CMPB/BHB	60/90/120	Rhs repeat proteins in bacterial competition and multicellular evolution.		
Soledad Perez Santangelo	SBS	CMPB	45/60/90/120	Exploring photo and thermomorphogenesis responses in legumes		
Soledad Perez Santangelo	SBS	CMPB	45/60/90/120	How temperature synchronizes circadian rhythms in legumes		
Paul Harris	SBS	CMPB	120	Synthesis of Daptomycin antibiotics		
Rebecca Deed	Chemical Sciences/SBS	CMPB	45/60/90/120	Isolation of *Brettanomyces bruxellensis* from dried fruits		
Richard Kingston	SBS	CMPB	60/90/120	Developing new computational imaging methods for structural biology		
Richard Kingston	SBS	CMPB	90/120	Structural basis for RNA editing during paramyxovirus transcrition.		
Robert Schaffer	SBS/PFR	CMPB	120	Molecular control of fruit quality traits		
Tony Hickey	SBS	CMPB	60/90/121	Bird red cell mitochondria		
Tony Hickey	SBS	CMPB	60/90/120	Free radical detection in breath		
Xue-Xian Zhang	SBS	CMPB	120	Gene regulation in bacteria: what determines the regulatory mode of a given gene?		
Iman Kavianinia	SBS	CMPB	120	Development of Antibody-Drug Conjugates for targeted cancer therapy		
Iman Kavianinia	SBS	CMPB	120	Smart nanodrugs for precision-based treatment of folate receptor alpha-positive malignancies		
Davide Mercadante	SCS	CMPB	60	Computational peptide design for the pH-dependent inhibition of the Clostridium botulinum toxin		
Davide Mercadante	SCS	CMPB	60	Enhancing protein expression by computational linker design		
Yuliana Yosaatmadja/Carolin	SBS	CMPB	60/90/120	Investigating an overlooked bacterial DNA repair system to fight infections		
Genetics/Genome Biology						
Nobuto Takeuchi	SBS	CMPB	90/120	Mathematical or computational modelling of microbial evolution		
Nobuto Takeuchi	SBS	CMPB	45/90/120	Comparative genomics of prokaryotes		
Kim Handley	SBS	EEB	90/120	Microbial comparative genomics (e.g. prophage analysis, osmoadaptations)		
Anna Santure	SBS	EEB	45/120	Recombination in hihi (stitchbird): why do males do it more?		
Anna Santure	SBS	EEB	45	Comparing mitochondrial and genomic signals of invasion in the common myna		
Anna Santure	SBS	EEB	45/120	Sex chromosomes and synteny of the unique and threatened Hochstetter's frog		